Table E: County summary of zip code area allocation of commercial fertilizer sold by farm and nonfarm use for IRW

		Arkansas			Oklahoma				
Zip Code		Benton County	Washington County	Arkansas Study Area	Adair County	Cherokee County	Delaware County	Oklahoma Study Area	**IRW Study Area Total**
Percent in County		Study Area Total	Study Area Total	Total	Study Area Total	Study Area Total	Study Area Total	Total	
Percent Relevant									
Farms by size , All farms		1,205	1,626	2,832	766	500	267	1,533	4,364
Percent of county farms in zip code area		50.73%	58.07%	54.71%	67.76%	40.91%	19.20%	127.87%	
Land in farms, acres		158,600	213,477	372,078	161,188	90,303	54,173	305,664	677,742
Fertilizer Amounts by Farm and Non-Farm Use, 2007									
Total tons of material, identified	Tons	10,955	3,362	14,317	3,561	336	153	4,050	18,367
Total Lbs of Actual Material	Lbs of N	3,678,379	1,474,696	5,153,075	2,750,873	168,220	93,145	3,012,237	8,165,312
	Lbs of P2O5	400,887	210,184	611,071	534,108	62,736	14,725	611,570	1,222,641
	Lbs of K2O	829,542	522,101	1,351,643	332,250	103,473	2,502	438,225	1,789,867
Farm Use	Lbs of N	3,416,942	1,301,717	4,718,658	2,670,976	145,812	91,444	2,908,232	7,626,890
	Lbs of P2O5	257,225	157,999	415,224	531,134	49,142	337,667	917,943	1,333,167
	Lbs of K2O	673,619	435,857	1,109,476	329,946	88,021	807	418,773	1,528,249
Non-Farm Use	Lbs of N	261,437	172,980	434,417	79,897	22,408	1,701	104,006	538,422
	Lbs of P2O5	143,662	52,185	195,847	2,975	169,489	694	173,158	369,004
	Lbs of K2O	155,923	86,244	242,167	2,304	207,039	1,696	211,039	453,206
Fertilizer Amounts by Farm and Non-Farm Use, 2006									
Total tons of material, identified	Tons	9,072	3,119	12,191	4,138	514	1,313	5,964	18,155
Total Lbs of Actual Material	Lbs of N	2,216,584	1,095,166	3,311,750	3,124,841	300,551	385,223	3,810,615	7,122,365
	Lbs of P2O5	468,151	314,790	782,941	147,337	77,603	26,756	251,696	1,034,638
	Lbs of K2O	706,065	522,365	1,228,430	340,342	90,650	21,469	452,461	1,680,891
Farm Use	Lbs of N	2,093,488	890,280	2,983,768	2,894,989	298,293	384,275	3,577,558	6,561,326
	Lbs of P2O5	407,414	251,492	658,906	147,337	77,603	24,560	249,500	908,407
	Lbs of K2O	631,144	433,478	1,064,622	201,945	88,266	21,469	311,680	1,376,302
Non-Farm Use	Lbs of N	123,035	204,886	327,921	623	2,258	948	3,829	331,750
	Lbs of P2O5	60,677	63,297	123,974	0	0	2,196	2,196	126,170
	Lbs of K2O	74,860	88,887	163,747	15,255	2,384	0	17,639	181,385
Fertilizer Amounts by Farm and Non-Farm Use, 2005									
Total tons of material, identified	Tons	5,894	2,439	8,334	2,902	358	277	3,537	11,870
Total Lbs of Actual Material	Lbs of N	2,006,104	1,025,137	3,031,241	2,354,978	228,306	167,942	2,751,226	5,782,467
	Lbs of P2O5	679,018	344,812	1,023,829	280,417	56,986	20,757	358,159	1,381,988
	Lbs of K2O	902,491	481,508	1,383,999	236,105	75,394	19,179	330,678	1,714,677
Farm Use	Lbs of N	1,710,435	766,710	2,477,145	1,979,837	224,904	73,943	2,278,684	4,755,829
	Lbs of P2O5	483,975	215,310	699,285	280,417	56,986	20,757	358,159	1,057,444
	Lbs of K2O	721,104	351,350	1,072,454	236,105	75,394	19,179	330,678	1,403,133
Non-Farm Use	Lbs of N	295,669	258,427	554,096	375,141	3,402	93,999	472,542	1,026,638
	Lbs of P2O5	195,043	129,501	324,544	0	0	0	0	324,544
	Lbs of K2O	181,387	130,157	311,545	0	0	0	0	311,545
Fertilizer Amounts by Farm and Non-Farm Use, 2004									
Total tons of material, identified	Tons	4,077	9,029	13,106	5,190	1,832	1,479	8,501	21,607
Total Lbs of Actual Material	Lbs of N	2,216,103	1,156,903	3,373,006	3,141,404	512,179	603,526	4,257,109	7,630,114
	Lbs of P2O5	449,245	368,224	817,469	463,128	133,131	49,480	645,739	1,463,208
	Lbs of K2O	863,808	573,875	1,437,682	842,826	240,676	77,722	1,161,224	2,598,906
Farm Use	Lbs of N	2,161,083	1,070,913	3,231,996	3,108,981	489,130	474,690	4,072,801	7,304,797
	Lbs of P2O5	429,420	316,767	746,187	391,633	132,575	49,398	573,605	1,319,792
	Lbs of K2O	846,802	495,376	1,342,178	842,826	240,267	71,125	1,154,218	2,496,396
Non-Farm Use	Lbs of N	55,020	85,990	141,010	32,423	23,048	128,836	184,307	325,317
	Lbs of P2O5	19,825	51,457	71,282	71,495	556	82	72,134	143,416
	Lbs of K2O	17,006	78,499	95,504	0	409	6,597	7,006	102,510
Fertilizer Amounts by Farm and Non-Farm Use, 2003									
Total tons of material, identified	Tons	4,051	2,750	6,801	6,976	1,251	1,267	9,494	16,295
Total Lbs of Actual Material	Lbs of N	1,970,842	1,334,070	3,304,912	4,132,716	804,881	782,006	5,719,603	9,024,515
	Lbs of P2O5	529,028	418,713	947,741	654,206	135,108	60,320	849,634	1,797,375
	Lbs of K2O	928,825	611,300	1,540,125	2,064,466	297,854	66,994	2,429,314	3,969,439
Farm Use	Lbs of N	1,902,746	1,272,758	3,175,504	3,885,475	776,093	577,101	5,238,669	8,414,173
	Lbs of P2O5	472,776	386,611	859,387	469,767	126,591	60,320	656,678	1,516,064
	Lbs of K2O	880,188	549,199	1,429,387	1,872,742	285,065	66,403	2,224,209	3,653,597
Non-Farm Use	Lbs of N	68,096	61,311	129,407	247,241	28,788	204,905	480,934	610,342
	Lbs of P2O5	56,252	32,102	88,354	184,439	8,518	0	192,957	281,311
	Lbs of K2O	48,637	62,101	110,738	191,724	12,789	591	205,104	315,843
Fertilizer Amounts by Farm and Non-Farm Use, 2002									
Total tons of material, identified	Tons	7,552	3,507	11,059	4,990	1,225	1,043	7,258	18,317
Total Lbs of Actual Material	Lbs of N	2,468,404	1,565,050	4,033,454	3,078,128	765,545	588,169	4,431,842	8,465,296
	Lbs of P2O5	859,164	440,832	1,299,996	539,586	138,407	129,309	807,303	2,107,299
	Lbs of K2O	1,168,121	732,070	1,900,192	1,031,385	219,252	167,941	1,418,578	3,318,770
Farm Use	Lbs of N	2,404,851	1,437,783	3,842,634	3,078,020	651,732	569,894	4,299,646	8,142,280
	Lbs of P2O5	819,718	376,439	1,196,157	539,532	105,793	111,308	756,633	1,952,791
	Lbs of K2O	1,130,054	637,963	1,768,018	1,031,331	163,269	149,921	1,344,521	3,112,539
Non-Farm Use	Lbs of N	63,553	127,267	190,819	108	113,813	18,275	132,196	323,015
	Lbs of P2O5	39,446	64,393	103,839	54	32,614	18,001	50,670	154,509
	Lbs of K2O	38,067	94,107	132,174	54	55,982	18,021	74,057	206,231
Fertilizer Amounts by Farm and Non-Farm Use, 2001									
Total tons of material, identified	Tons	3,017	2,606	5,624	5,743	1,121	743	7,607	13,231
Total Lbs of Actual Material	Lbs of N	1,393,822	1,205,557	2,599,379	3,915,148	693,963	0	4,609,111	7,208,490
	Lbs of P2O5	484,416	451,085	935,501	453,079	135,517	418,284	1,006,881	1,942,381
	Lbs of K2O	753,642	576,731	1,330,373	466,276	204,071	60,008	730,355	2,060,728
Farm Use	Lbs of N	1,381,867	1,091,958	2,473,826	3,812,130	581,395	36,524	4,430,049	6,903,874
	Lbs of P2O5	478,410	356,348	834,758	429,821	104,528	0	534,349	1,369,107
	Lbs of K2O	749,056	492,104	1,241,160	430,043	155,737	417,390	1,003,170	2,244,330
Non-Farm Use	Lbs of N	4,586	113,599	118,184	103,018	112,569	58,923	274,510	392,694
	Lbs of P2O5	6,006	94,736	100,743	23,258	30,989	35,687	89,934	190,676
	Lbs of K2O	4,586	84,627	89,213	36,234	48,333	894	85,461	174,674

Fertilizer Amounts by County and Grouped by Farm and Non-Farm Use, 2007

11/27/2008

X

		Arkansas			Oklahoma					TOTAL
		Benton County	Washington County	TOTAL	Adair County	Cherokee County	Delaware County	Sequoyah County	TOTAL	FOR COUNTIES
Total tons of material, identified	Tons	21,595	5,791	27,385	5,254	821	799	387	7,261	34,646
Total Lbs of Actual Material	Lbs of N	7,251,118	2,539,634	9,790,752	4,059,605	411,202	485,051	533,917	5,489,774	15,280,526
	Lbs of P2O5	790,262	361,966	1,152,227	788,211	153,355	76,682	2,226	1,020,474	2,172,701
	Lbs of K2O	1,635,260	899,131	2,534,391	490,318	252,932	13,029	247	756,526	3,290,917
Farm Use	Lbs of N	6,735,752	2,241,738	8,977,490	3,941,697	356,427	476,194	532,112	5,306,430	14,283,920
	Lbs of P2O5	507,064	272,096	779,160	783,821	120,124	73,066	2,226	979,238	1,758,398
	Lbs of K2O	1,327,893	750,606	2,078,499	486,918	215,160	4,200	47	706,325	2,784,824
Non-Farm Use	Lbs of N	515,366	297,896	813,261	117,908	54,775	8,856	1,805	183,344	996,606
	Lbs of P2O5	283,198	89,870	373,068	4,390	33,230	3,615	0	41,236	414,303
	Lbs of K2O	307,367	148,525	455,892	3,400	37,772	8,829	200	50,201	506,093
MANURE BAGGED AND SOLD	Tons	8	0	8	0	0	0	0	0	8
FERTILIZER GRADE UNKNOWN	Tons	5	1	6	0	0	0	0	0	6
SPECIALITY GRADE UNKNOWN	Tons	4,671	691	5,362	0	4	1	0	5	5,367
MULTIPLE NUTRIENT GRADE UNKNOWN	Tons	0	0	0	0	0	0	2	2	2

Fertilizer Amounts by County and Grouped by Farm and Non-Farm Use, 2006

11/27/2008

X

		Arkansas			Oklahoma					TOTAL
		Benton County	Washington County	TOTAL	Adair County	Cherokee County	Delaware County	Sequoyah County	TOTAL	FOR COUNTIES
Total tons of material, identified	Tons	17,883	5,372	23,255	6,106	1,256	6,835	91	14,288	37,544
Total Lbs of Actual Material	Lbs of N	4,369,510	1,886,029	6,255,539	4,611,489	734,677	2,006,044	13,080	7,365,290	13,620,829
	Lbs of P2O5	922,858	542,112	1,464,970	217,433	189,695	139,334	0	546,462	2,011,432
	Lbs of K2O	1,391,853	899,585	2,291,438	502,260	221,588	111,800	0	835,648	3,127,086
Farm Use	Lbs of N	4,126,853	1,533,187	5,660,040	4,272,285	729,157	2,001,110	12,240	7,014,791	12,674,831
	Lbs of P2O5	803,127	433,105	1,236,233	217,433	189,695	127,898	0	535,026	1,771,259
	Lbs of K2O	1,244,162	746,510	1,990,672	298,020	215,760	111,800	0	625,580	2,616,252
Non-Farm Use	Lbs of N	242,537	352,842	595,379	920	5,520	4,935	840	12,215	607,594
	Lbs of P2O5	119,611	109,007	228,618	0	0	11,436	0	11,436	240,053
	Lbs of K2O	147,570	153,075	300,645	22,512	5,828	0	0	28,340	328,985
MANURE BAGGED AND SOLD	Tons	12	0	12	0	0	0	0	0	12
FERTILIZER GRADE UNKNOWN	Tons	10,231	1,390	11,621	0	0	0	0	0	11,621
SPECIALITY GRADE UNKNOWN	Tons	0	0	0	0	0	0	0	0	0
MULTIPLE NUTRIENT GRADE UNKNOWN	Tons	0	0	0	351	77	105	38	572	572

Fertilizer Amounts by County and Grouped by Farm and Non-Farm Use, 2005

Based on Container code to define farm and non-farm use for Arkansas and Use code

		Arkansas			Oklahoma					TOTAL
		Benton County	Washington County	TOTAL	Adair County	Cherokee County	Delaware County	Sequoyah County	TOTAL	FOR COUNTIES
Total tons of material, identified	Tons	11,619	4,201	15,820	4,283	874	1,442	387	6,985	22,805
Total Lbs of Actual Material	Lbs of N	3,954,594	1,765,430	5,720,024	3,475,363	558,078	874,555	519,792	5,427,788	11,147,812
	Lbs of P2O5	1,338,535	593,814	1,932,349	413,825	139,297	108,090	18,360	679,572	2,611,921
	Lbs of K2O	1,779,063	829,224	2,608,287	348,432	184,296	99,876	0	632,604	3,240,891
Farm Use	Lbs of N	3,371,748	1,320,382	4,692,130	3,423,316	558,078	874,555	519,792	5,375,741	10,067,870
	Lbs of P2O5	954,050	370,794	1,324,845	413,825	139,297	108,090	18,360	679,572	2,004,417
	Lbs of K2O	1,421,498	605,075	2,026,573	348,432	184,296	99,876	0	632,604	2,659,177
Non-Farm Use	Lbs of N	582,846	445,048	1,027,894	52,047	0	0	0	52,047	1,079,941
	Lbs of P2O5	384,484	223,020	607,504	0	0	0	0	0	607,504
	Lbs of K2O	357,565	224,149	581,714	0	0	0	0	0	581,714
MANURE BAGGED AND SOLD	Tons	3	0	3	0	0	0	0	0	3
FERTILIZER GRADE UNKNOWN	Tons	12,424	1,442	13,866	0	0	0	0	0	13,866
SPECIALITY GRADE UNKNOWN	Tons	0	0	0	24	57	8	0	89	89
MULTIPLE NUTRIENT GRADE UNKNOWN	Tons	0	0	0	486	49	53	0	588	588

Fertilizer Amounts by County and Grouped by Farm and Non-Farm Use, 2004

		Arkansas			Oklahoma					TOTAL
		Benton County	Washington County	TOTAL	Adair County	Cherokee County	Delaware County	Sequoyah County	TOTAL	FOR COUNTIES
Total tons of material, identified	Tons	8,036	15,549	23,585	7,659	4,479	7,703	0	19,841	43,426
Total Lbs of Actual Material	Lbs of N	4,368,561	1,992,349	6,360,910	4,635,932	1,251,984	3,142,854	0	9,030,770	15391679.7
	Lbs of P2O5	885,587	634,133	1,519,721	683,462	325,430	257,666	0	1,266,557	2786278
	Lbs of K2O	1,702,808	988,293	2,691,100	1,243,801	588,316	404,736	0	2,236,853	4927953.2
Farm Use	Lbs of N	4,260,102	1,844,262	6,104,364	2,800,531	1,039,072	2,161,239	0	6,000,842	12105206.1
	Lbs of P2O5	846,507	545,517	1,392,024	306,010	275,752	140,889	0	722,651	2114674.8
	Lbs of K2O	1,669,284	853,107	2,522,391	815,708	306,408	201,894	0	1,324,010	3846401.4
Non-Farm Use	Lbs of N	108,459	148,087	256,546	1,835,401	212,912	981,615	0	3,029,928	3286473.6
	Lbs of P2O5	39,080	88,616	127,697	377,451	49,678	116,777	0	543,906	671603.2
	Lbs of K2O	33,523	135,186	168,709	428,093	281,908	202,842	0	912,843	1081551.8
MANURE BAGGED AND SOLD	Tons	7	7	14	0	0	0	0	0	14.2
FERTILIZER GRADE UNKNOWN	Tons	8,901	1,506	10,407	0	0	0	0	0	10406.93
SPECIALITY GRADE UNKNOWN	Tons	0	0	0	156	5	24	0	186	185.56
MULTIPLE NUTRIENT GRADE UNKNOWN	Tons	0	0	0	0	0	0	0	0	0

Fertilizer Amounts by County and Grouped by Farm and Non-Farm Use, 2003

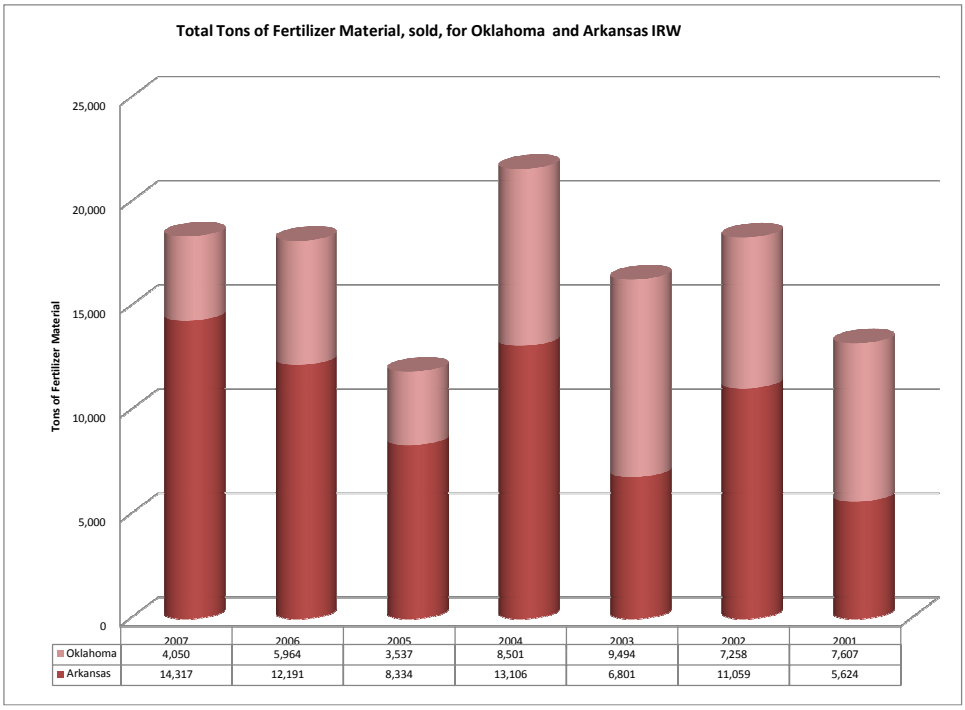
		Arkansas			Oklahoma					TOTAL
		Benton County	Washington County	TOTAL	Adair County	Cherokee County	Delaware County	Sequoyah County	TOTAL	FOR COUNTIES
Total tons of material, identified	Tons	7,985	4,736	12,721	10,295	3,058	6,597	76	20,026	32,747
Total Lbs of Actual Material	Lbs of N	3,885,083	2,297,455	6,182,538	6,098,862	1,967,475	4,072,286	35,284	12,173,908	18,356,446
	Lbs of P2O5	1,042,863	721,082	1,763,945	965,446	330,263	314,116	46,239	1,656,064	3,420,008
	Lbs of K2O	1,830,975	1,052,745	2,883,720	3,046,639	728,082	348,871	0	4,123,592	7,007,312
Farm Use	Lbs of N	3,750,846	2,191,869	5,942,715	5,733,996	1,897,104	4,010,049	35,284	11,676,434	17,619,149
	Lbs of P2O5	931,974	665,798	1,597,772	693,259	309,442	261,075	46,239	1,310,015	2,907,787
	Lbs of K2O	1,735,097	945,798	2,680,895	2,763,702	438,504	292,246	0	3,494,452	6,175,347
Non-Farm Use	Lbs of N	134,237	105,586	239,823	364,866	70,371	62,237	0	497,474	737,297
	Lbs of P2O5	110,889	55,284	166,173	272,186	20,821	53,041	0	346,048	512,221
	Lbs of K2O	95,878	106,947	202,825	282,937	289,578	56,625	0	629,140	831,965
MANURE BAGGED AND SOLD	Tons	4	2	6	0	0	0	0	0	6
FERTILIZER GRADE UNKNOWN	Tons	310	224	534	0	3	0	0	4	538
SPECIALITY GRADE UNKNOWN	Tons	0	0	0	195	2	8	0	205	205
MULTIPLE NUTRIENT GRADE UNKNOWN	Tons	0	2	2	0	0	0	0	0	2

Fertilizer Amounts by County and Grouped by Farm and Non-Farm Use, 2002

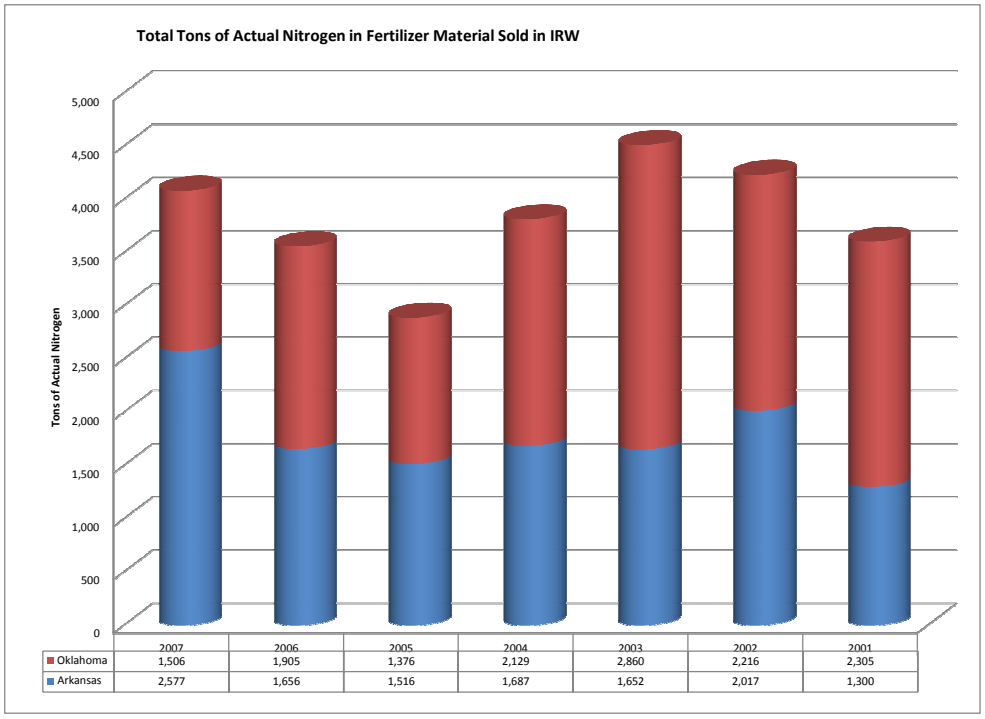
		Arkansas			Oklahoma					TOTAL
		Benton County	Washington County	TOTAL	Adair County	Cherokee County	Delaware County	Sequoyah County	TOTAL	FOR COUNTIES
Total tons of material, identified	Tons	14,886	6,040	20,926	7,364	2,993	5,434	1,694	17,484	38,411
Total Lbs of Actual Material	Lbs of N	4,865,917	2,695,235	7,561,152	4,542,553	1,871,320	3,062,884	826,861	10,303,618	17864769.94
	Lbs of P2O5	1,693,654	759,174	2,452,829	796,295	338,327	673,377	349,151	2,157,151	4609979.14
	Lbs of K2O	2,302,695	1,260,728	3,563,423	1,522,069	535,945	874,553	405,186	3,337,753	6901175.14
Farm Use	Lbs of N	4,740,637	2,476,064	7,216,701	4,542,393	1,783,892	3,036,242	823,607	10,186,134	17402835.6
	Lbs of P2O5	1,615,894	648,281	2,264,176	796,215	305,746	672,835	346,495	2,121,291	4385466.8
	Lbs of K2O	2,227,655	1,098,663	3,326,317	1,521,989	495,839	873,129	403,304	3,294,261	6620578
Non-Farm Use	Lbs of N	125,280	219,171	344,451	160	87,428	26,641	3,254	117,483	461934.34
	Lbs of P2O5	77,760	110,893	188,653	80	32,581	542	2,657	35,859	224512.34
	Lbs of K2O	75,040	162,065	237,105	80	40,106	1,424	1,882	43,492	280597.14
MANURE BAGGED AND SOLD	Tons	0	0	0	0	0	0	0	0	0
FERTILIZER GRADE UNKNOWN	Tons	0	0	0	0	9	0	0	9	9.48
SPECIALITY GRADE UNKNOWN	Tons	0	0	0	0	0	0	0	0	0
MULTIPLE NUTRIENT GRADE UNKNOWN	Tons	0	0	0	0	0	0	0	0	0

Fertilizer Amounts by County and Grouped by Farm and Non-Farm Use, 2001

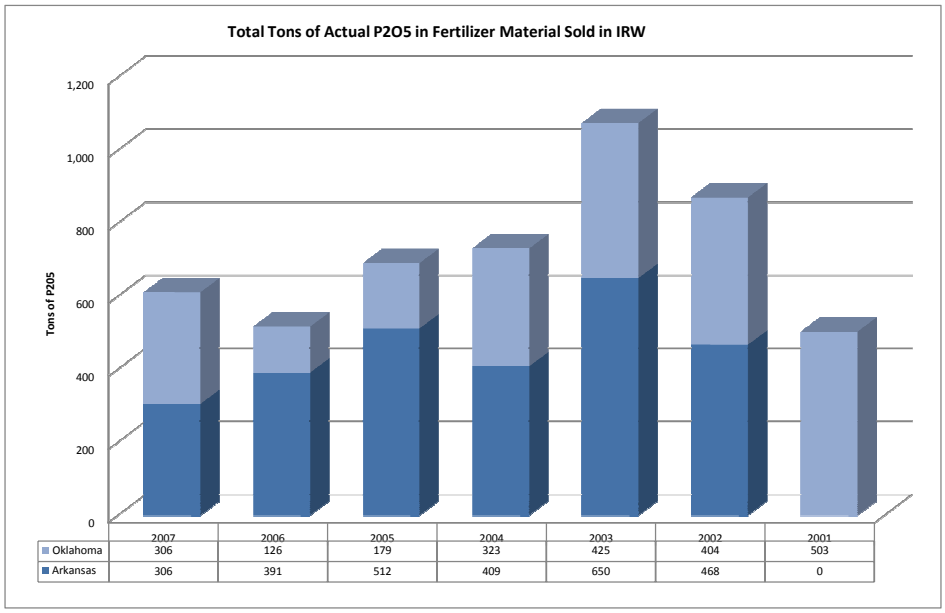
		Arkansas			Oklahoma					TOTAL
		Benton County	Washington County	TOTAL	Adair County	Cherokee County	Delaware County	Sequoyah County	TOTAL	FOR COUNTIES
Total tons of material, identified	Tons	5,948	4,488	10,436	8,476	2,739	3,871	11,819	26,905	37,341
Total Lbs of Actual Material	Lbs of N	2,747,615	2,076,138	4,823,753	5,777,786	1,696,343	2,178,211	7,411,851	17,064,191	21,887,944
	Lbs of P2O5	954,920	776,831	1,731,751	668,632	331,262	312,492	271,693	1,584,080	3,315,831
	Lbs of K2O	1,485,640	993,211	2,478,851	688,108	498,836	190,198	216,890	1,594,032	4,072,883
Farm Use	Lbs of N	2,724,048	1,880,506	4,604,554	5,567,311	1,543,012	2,176,653	7,410,114	16,697,091	21,301,645
	Lbs of P2O5	943,080	613,682	1,556,762	634,309	292,504	311,742	270,753	1,509,308	3,066,069
	Lbs of K2O	1,476,600	847,471	2,324,071	634,636	444,334	188,789	215,340	1,483,099	3,807,171
Non-Farm Use	Lbs of N	9,040	195,633	204,673	210,475	153,331	1,558	1,736	367,100	571,773
	Lbs of P2O5	11,840	163,149	174,989	34,323	38,759	750	940	74,772	249,762
	Lbs of K2O	9,040	145,740	154,780	53,472	54,503	1,409	1,549	110,933	265,713
MANURE BAGGED AND SOLD	Tons	0	0	0	0	0	0	0	0	0
FERTILIZER GRADE UNKNOWN	Tons	0	0	0	0	47	1	0	48	48
SPECIALITY GRADE UNKNOWN	Tons	0	0	0	0	17	0	0	17	17
MULTIPLE NUTRIENT GRADE UNKNOWN	Tons	0	0	0	6	24	0	0	30	30



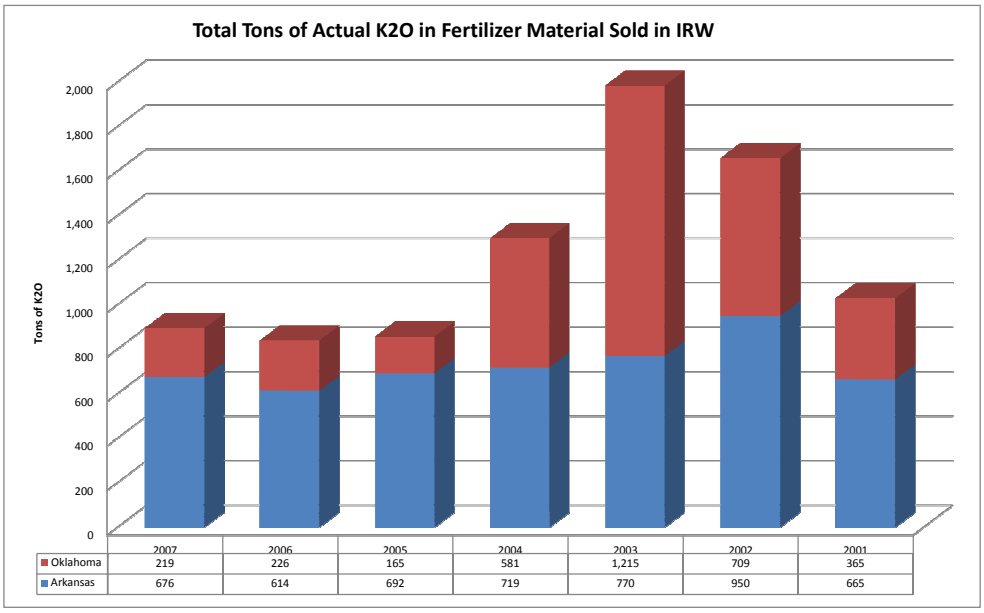
	2007	2006	2005	2004	2003	2002	2001
Oklahoma	4,050	5,964	3,537	8,501	9,494	7,258	7,607
Arkansas	14,317	12,191	8,334	13,106	6,801	11,059	5,624



	2007	2006	2005	2004	2003	2002	2001
Oklahoma	1,506	1,905	1,376	2,129	2,860	2,216	2,305
Arkansas	2,577	1,656	1,516	1,687	1,652	2,017	1,300



	2007	2006	2005	2004	2003	2002	2001
Oklahoma	306	126	179	323	425	404	503
Arkansas	306	391	512	409	650	468	0



	2007	2006	2005	2004	2003	2002	2001
Oklahoma	219	226	165	581	1,215	709	365
Arkansas	676	614	692	719	770	950	665

Appendix F

Estimation of Manure deposited directly into Streams and Riparian Areas and outside of Streams and Riparian Areas.

Estimating manure deposited directly in streams, riparian areas, and outside of stream and riparian areas.

According to Alexander, Table 4		
	1997	2002
Beef Cows & Heifers that calved, numbers	97,440	101,367
Dairy Cattle, numbers	9,958	10,280
(It appears the Alexander Report is missing Other Cattle)		

From Clay	According to 2002 Ag Census			Estimated 1997 Values based on Alexander Percentage		
	Arkansas	Oklahoma	Total	Arkansas	Oklahoma	Total
Beef Cow numbers	65,058	38,678	103,736	62,538	37,180	99,717
Milk Cow numbers	3,411	7,418	10,829	3,304	7,186	10,490
Other Cattle and Calves	54,033	30,986	85,019	51,940	29,786	81,725
Beef Animals (non dairy)	119,091	69,664	188,755	114,477	66,965	181,443

According to Oklahoma Conservation Commission, 1999 Animals in subwatersheds in Illinois River Basin	
	1997
Beef Cows & Heifers that calved, numbers	53,200
Dairy Cattle, numbers	2,675
Beef Cows & Heifers that calved, lbs/yr of N	5,809,440
Dairy Cattle, lbs/yr of N	301,847

	Arkansas	Oklahoma	Total	Arkansas	Oklahoma	Total
				(Values separated to Beef Animals and Milk Cows)		
Beef Animals (non dairy)	94,611	55,344	149,955	90,946	53,200	144,146
Milk Cow numbers	1,270	2,761	4,031	1,230	2,675	3,905

(Calculations made to verify the estimates from the Oklahoma Conservation Commission)

Clay Weights
Beef Cattle 887
Dairy Cattle 1200

Calculated from Oklahoma Conservation Commission, 1999 data		Comparison of Oklahoma Conservation Commission, 1999 data with data used by Clay		
	1997	#N/1000# animal	Clay Table C, #N/1000# animal/year	
Beef Cows & Heifers that calved, lbs/yr of N per animal	109.2	123.11 (1)	124	(1) Converting the 109.2 to the per 1000# animal basis by dividing 1000 by 887 and multiplying times 109.2 which equals 123.11.
Dairy Cattle, lbs/yr of N per animal	112.84	94.03 (2)	164	(2) Converting the 112.84 to the per 1000# animal basis by dividing 1000 by 1200 and multiplying times 112.84 which equals 94.03.

Percent of Animals that have direct access to riparian areas in the subwatersheds in Illinois River Basin, based on Oklahoma Conservation Commission data

	1997	Stream and Riparian area
All Beef cattle, numbers	79.44%	79.44%
Dairy Cattle, numbers	37.23%	37.23%

(Used to allocate animals that have access to streams and riparian areas)

Cattle with access to flowing streams deposit 1.8% of feces direct in flowing stream. 1.80%
Horses assumed to be at same level as cattle
Ducks and Geese assumed to deposit 50% of feces direct in flowing stream. 0.5

	Months		Days	Hrs/Day	Hours/Year
Spring	4	March-June	122	16	1952
Summer	2	July-August	62	12	744
Fall	4	September-December	122	16	1952
Winter	2	January-February	59	6	354

Total Hours per Year in riparian area	5002
Total Hours in Year	8760
Percent in riparian area	57.10%
Average Hours per day in riparian area	13.70

Cattle spend on the average 13.70 hours per day in loafing area and if cows deficate every two hours (12 times per day), then they deficate 7 times in loafing area.
This is equal to 57.10% of manure. Remainder is deposited outside of stream and riparian area.
Assume same on Dairy Cattle 57.10%
Horses are assumed to spend all their time within stream and riparian area for those in that area (90% of horses)

Estimating manure and its components that are deposited directly in stream, riparian areas, and outside of stream and riparian areas.

	Arkansas	Oklahoma	IRW	% with direct access to riparian areas	Number of animals with access to	Number of animals with access to riparian areas	Direct deposit of feces in flowing stream	Direct deposit to riparian areas	Deposit of feces outside stream and riparian areas
							Note 1	Note 2	Note 3
Beef cow inventory, number	65,058	38,678	103,737	79.44%	82,413	82,413			
Wet Manure Weight, Tons			1,195,902				17,101	542,497	636,303
N, DRY LBS			14,020,918				200,499	6,360,314	7,460,105
P, DRY LBS			3,793,895				54,253	1,721,026	2,018,617
K, DRY LBS			8,659,979				123,837	3,928,429	4,607,712
Total coliform, x10^{10} cfu			1,195,901,836				17,101,357	542,497,395	636,303,084
Fecal coliform, x10^{10} cfu			536,093,927				7,666,126	243,188,487	285,239,313
Fecal streptococcus, x10^{10} cfu			577,331,921				8,255,828	261,895,294	307,180,799
Milk cow inventory, number	3,411	7,418	10,829	37.23%	4,031	4,031			
Wet Manure Weight, Tons			129,347				867	27,495	100,985
N, DRY LBS			1,271,567				8,521	270,294	992,752
P, DRY LBS			337,299				2,260	71,699	263,340
K, DRY LBS			1,040,603				6,973	221,199	812,432
Total coliform, x10^{10} cfu			1,498,109,828				10,038,622	318,449,949	1,169,621,256
Fecal coliform, x10^{10} cfu			21,572,782				144,556	4,585,679	16,842,546
Fecal streptococcus, x10^{10} cfu			125,841,226				843,244	26,749,796	98,248,185
Other Cattle and Calves inventory, number	54,033	30,986	85,019	79.44%	67,543	67,543			
Wet Manure Weight, Tons			674,945				9,652	306,176	359,118
N, DRY LBS			7,913,149				113,158	3,589,645	4,210,347
P, DRY LBS			2,141,205				30,619	971,316	1,139,270
K, DRY LBS			4,887,533				69,892	2,217,134	2,600,508
Total coliform, x10^{10} cfu			674,945,095				9,651,693	306,175,595	359,117,808
Fecal coliform, x10^{10} cfu			302,561,594				4,326,621	137,251,129	160,983,845
Fecal streptococcus, x10^{10} cfu			325,835,563				4,659,438	147,808,908	173,367,218
Hogs and pigs inventory, number	21,784	362	22,146	0.00%	0	0	Note 4		
Wet Manure Weight, Tons			46,082				0	0	46,082
N, DRY LBS			524,895				0	0	524,895
P, DRY LBS			394,988				0	0	394,988
K, DRY LBS			636,369				0	0	636,369
Total coliform, x10^{10} cfu			23,040,963				0	0	23,040,963
Fecal coliform, x10^{10} cfu			8,777,510				0	0	8,777,510
Fecal streptococcus, x10^{10} cfu			263,325,289				0	0	263,325,289
Hogs and pigs other inventory, number	57,922	85,907	143,830	0.00%	0	0	Note 4		
Wet Manure Weight, Tons			135,073				0	0	135,073
N, DRY LBS			1,538,550				0	0	1,538,550
P, DRY LBS			1,157,772				0	0	1,157,772
K, DRY LBS			1,865,299				0	0	1,865,299
Total coliform, x10^{10} cfu			67,536,706				0	0	67,536,706
Fecal coliform, x10^{10} cfu			25,728,269				0	0	25,728,269
Fecal streptococcus, x10^{10} cfu			771,848,064				0	0	771,848,064
Sheep and lambs inventory, number	1,281	648	1,930	0.00%	0	0	Note 4		
Wet Manure Weight, Tons			1,409				0	0	1,409
N, DRY LBS			29,583				0	0	29,583
P, DRY LBS			6,128				0	0	6,128
K, DRY LBS			22,539				0	0	22,539
Total coliform, x10^{10} cfu			633,912				0	0	633,912
Fecal coliform, x10^{10} cfu			1,408,694				0	0	1,408,694
Fecal streptococcus, x10^{10} cfu			1,972,172				0	0	1,972,172
Horses and ponies of all ages inventory, number	4,707	3,487	8,194	80.00%	6,555	6,555	Note 5		
Wet Manure Weight, Tons			83,892				1,208	67,114	15,570
N, DRY LBS			986,963				14,212	789,571	183,180
P, DRY LBS			233,581				3,364	186,865	43,353
K, DRY LBS			822,470				11,844	657,976	152,650
Total coliform, x10^{10} cfu			723,773,205				10,422,334	579,018,564	134,332,307
Fecal coliform, x10^{10} cfu			138,175				1,990	110,540	25,645
Fecal streptococcus, x10^{10} cfu			85,536,833				1,231,730	68,429,467	15,875,636
Whitetail Deer population	11,077	18,323	29,400	75.00%	0	22,050	Note 6		
Wet Manure Weight, Tons			21,421				0	16,066	5,355
N, DRY LBS			481,975				0	361,481	120,494
P, DRY LBS			74,974				0	56,230	18,743
K, DRY LBS			321,317				0	240,988	80,329
Total coliform, x10^{10} cfu			0				0	0	0
Fecal coliform, x10^{10} cfu			535,528				0	401,646	133,882
Fecal streptococcus, x10^{10} cfu			0				0	0	0
Wild Turkey population	1,762	1,802	3,564	75.00%	0	2,673	Note 6		
Wet Manure Weight, Tons			459				0	344	115
N, DRY LBS			12,098				0	9,073	3,024
P, DRY LBS			4,488				0	3,366	1,122
K, DRY LBS			4,683				0	3,512	1,171
Total coliform, x10^{10} cfu			0				0	0	0
Fecal coliform, x10^{10} cfu			12,098				0	9,073	3,024
Fecal streptococcus, x10^{10} cfu			0				0	0	0
Geese population, goose days in study area	68,434	60,066	128,500	100.00%	128,500	128,500	Note 7		
Wet Manure Weight, Tons			24				12	12	0
N, DRY LBS			392				196	196	0
P, DRY LBS			148				74	74	0
K, DRY LBS			0				0	0	0
Total coliform, x10^{10} cfu			0				0	0	0
Fecal coliform, x10^{10} cfu			629,790				314,895	314,895	0
Fecal streptococcus, x10^{10} cfu			0				0	0	0
Duck population, duck days in study area	55,015	112,886	167,900	100.00%	167,900	167,900	Note 7		
Wet Manure Weight, Tons			18				9	9	0
N, DRY LBS			504				252	252	0
P, DRY LBS			181				91	91	0
K, DRY LBS			238				119	119	0
Total coliform, x10^{10} cfu			0				0	0	0
Fecal coliform, x10^{10} cfu			40,800				20,400	20,400	0
Fecal streptococcus, x10^{10} cfu			90,666				45,333	45,333	0

Notes for above table:

Note 1: Related to Direct deposit of feces in flowing stream
Feces that is directly deposited by animals in the flowing streams was estimated to be 1.8 percent of all feces produced. The range was 1.6 to 2.0 percent. This was used for both beef cows , other cattle and dairy cows.

Note 2: Related to Direct deposit to riparian areas

According to Oklahoma Conservation Commission data, 53,200 beef cows and heifers in Oklahoma had access to stream areas in the IRW in 1997. Using Alexander and Clay numbers for 2002 to form a basis for adjusting the Alexander number for 1997 to reflect Clay number that is based on zip code data, to form an estimate of cows and heifers in the IRW in 1997. This number then, was compared with the number from the Oklahoma Conservation Commission data to show that 79.44% of the beef cows had access to the stream and riparian areas. This process was used for beef cows, other cattle, and dairy cows.

Note 3: Related to Deposit of feces outside stream and riparian areas
The remainder of the feces produced in the IRW is deposited outside of the stream and riparian areas.

Note 4: Related to Swine and Sheep
Feces produced by swine is all harvested indirectly and therefore would be deposited outside of the stream and riparian areas. Sheep tend to graze in the more open, upland areas to not make them available to predators that are generally in vegatative cover.

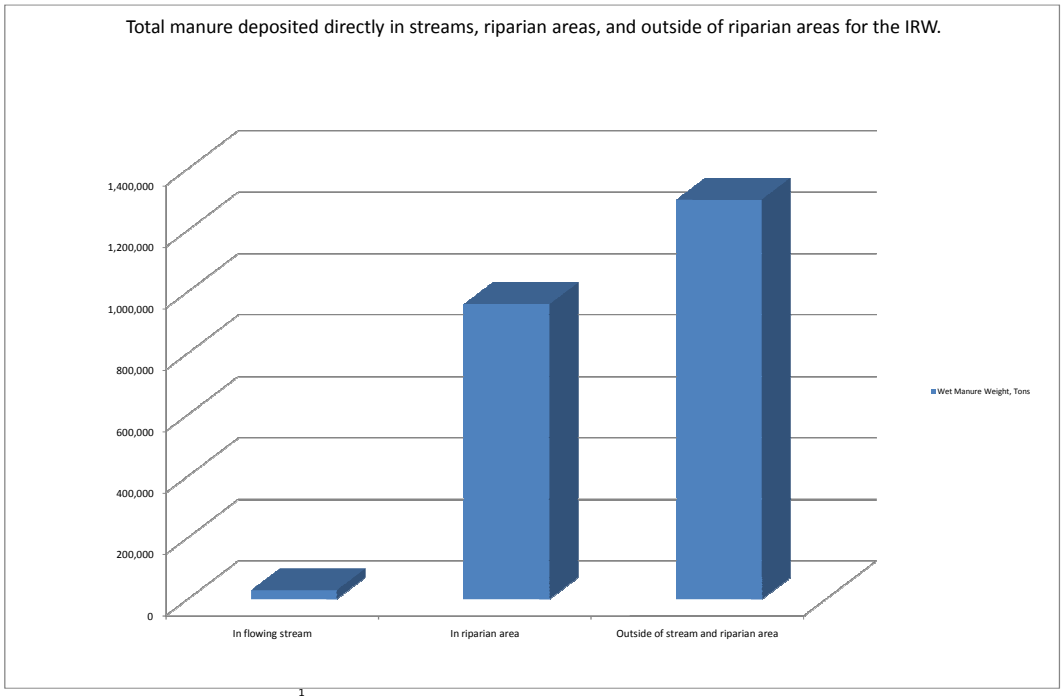
Note 5: Related to Horses
It was assumed that 90% of horses are housed in stream and riparian areas by people living on smaller tracts in those areas. Note 1 also applies to horses about direct deposit in flowing stream. 10% of horses are housed in the stream area. 10 % of horses was assumed to be outside of stream and riparian areas.

Note 6: Related to Wildlife (Deer, Wild Turkeys)
It was assumed that 75% of deer and wild turkeys had access to the streams and riparian areas.

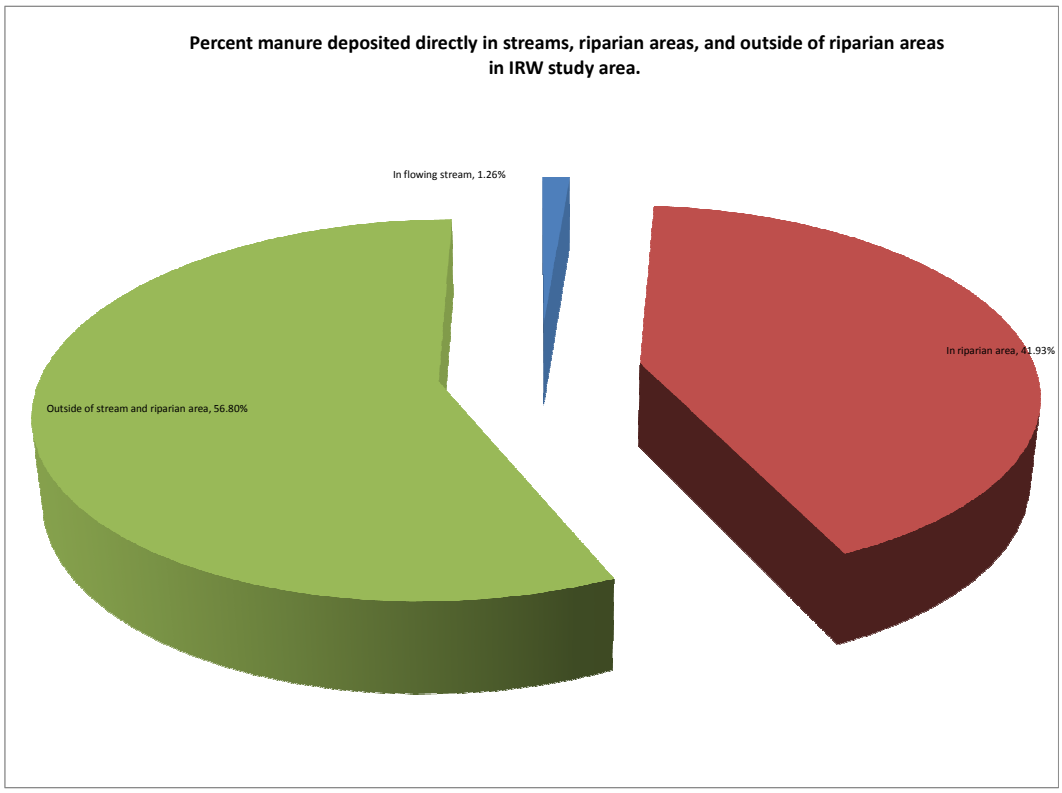
Note 7: Related to Wildlife (Geese, Ducks)
It was assumed that 100% of geese and ducks had access to the stream areas.

Total for IRW Study Area, manure and its components that are deposited in streams, close to streams, in riparian areas, and outside of riparian areas, not including poultry.
Adjusted for access to, grazing habits, and loafing habits.

	Direct Deposit	In flowing stream	In riparian area	Outside of stream and riparian area
Wet Manure Weight, Tons	2,288,572	28,849	959,712	1,300,010
N, DRY LBS	26,780,595	336,837	11,380,827	15,062,931
P, DRY LBS	8,144,660	90,660	3,010,667	5,043,333
K, DRY LBS	18,261,031	212,665	7,269,357	10,779,010
Total coliform, $x10^{10}$ cfu	4,183,941,545	47,214,006	1,746,141,503	2,390,586,035
Fecal coliform, $x10^{10}$ cfu	897,499,166	12,474,587	385,881,850	499,142,729
Fecal streptococcus, $x10^{10}$ cfu	2,151,781,734	15,035,573	504,928,797	1,631,817,363
Percent in each category				
Wet Manure Weight, Tons	100.00%	1.26%	41.93%	56.80%
N, DRY LBS	100.00%	1.26%	42.50%	56.25%
P, DRY LBS	100.00%	1.11%	36.96%	61.92%
K, DRY LBS	100.00%	1.16%	39.81%	59.03%
Total coliform, $x10^{10}$ cfu	100.00%	1.13%	41.73%	57.14%
Fecal coliform, $x10^{10}$ cfu	100.00%	1.39%	43.00%	55.61%
Fecal streptococcus, $x10^{10}$ cfu	100.00%	0.70%	23.47%	75.84%


Total manure deposited directly in streams, riparian areas, and outside of riparian areas for the IRW.
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
In flowing stream
In riparian area
Outside of stream and riparian area
Wet Manure Weight, Tons

1


Percent manure deposited directly in streams, riparian areas, and outside of riparian areas in IRW study area.
In flowing stream, 1.26%
In riparian area, 41.93%
Outside of stream and riparian area, 56.80%

Appendix G

Manure Produced on a Wet Basis and Dry Basis and Adjusted for Fermentation loss (composting effect) during Accumulation.

Manure as produced on a wet basis and dry basis and as adjusted for direct and indirect deposit and composting.

Quantities before adjustment is made		Dry Manure		Direct or Indirect Deposit/Composting			Quantities adjusted for Indirect Deposit/Composting	
For Study Area	As Produced Total	Percent Moisture	Tons Produced, Dry Wt Basis	Method of Deposit/Harvest Direct	Indirect	Delay Factor	Wet Manure Tons	Tons Produced, Dry Wt Basis
Beef cow inventory, number	103,737			100.00%	0.00%			
Wet Manure Weight, Tons	1,195,902	88.40%	138,725				1,195,902	138,725
Milk cow inventory, number	10,829			67.00%	33.00%	Note 1		
Wet Manure Weight, Tons	154,296	87.50%	19,287			16.17%	129,347	16,168
Other Cattle and Calves inventory, number	85,019			100.00%	0.00%			
Wet Manure Weight, Tons	674,945	88.40%	78,294				674,945	78,294
Hogs and pigs inventory, number	22,146			0.00%	100.00%	Note 2		
Wet Manure Weight, Tons	92,164	90.00%	9,216			50.00%	46,082	4,608
Hogs and pigs other inventory, number	143,830			0.00%	100.00%	Note 2		
Wet Manure Weight, Tons	270,147	90.00%	27,015			50.00%	135,073	13,507
Sheep and lambs inventory, number	1,930			100.00%	0.00%			
Wet Manure Weight, Tons	1,409	75.00%	352				1,409	352
Horses and ponies of all ages inventory, number	8,194			100.00%	0.00%			
Wet Manure Weight, Tons	83,892	78.00%	18,456				83,892	18,456
TOTAL UNITS, NONPOULTRY, DOMESTIC LIVESTOCK								
Wet Manure Weight, Tons	2,472,755		291,345				2,266,649	270,110
Whitetail Deer population	29,400			100.00%	0.00%			
Wet Manure Weight, Tons	21,421	75.00%	5,355				21,421	5,355
Wild Turkey population	3,564			100.00%	0.00%			
Wet Manure Weight, Tons	459	74.47%	117				459	117
Geese population, goose days in study area	128,500			100.00%	0.00%			
Wet Manure Weight, Tons	24	71.82%	7				24	7
Duck population, duck days in study area	167,900			100.00%	0.00%			
Wet Manure Weight, Tons	18	71.82%	5				18	5
TOTAL UNITS,NONPOULTRY, WILDLIFE								
Wet Manure Weight, Tons	21,922		5,484				21,922	5,484
Layers 20 weeks old and older inventory, number	2,469,038			0.00%	100.00%	Note 3		
Wet Manure Weight, Tons	113,141	75.00%	28,285			20.53%	89,913	44,957
, Broilers and other meat type chickens sold, number	147,522,269			0.00%	100.00%	Note 4		
Wet Manure Weight, Tons	691,234	75.00%	172,809			31.17%	495,602	118,944
Turkeys sold, number	669,453			0.00%	100.00%	Note 5		
Wet Manure Weight, Tons	35,397	75.00%	8,849			0.39%	25,927	8,815
TOTAL UNITS POULTRY								
Wet Manure Weight, Tons	839,773		209,943				611,442	172,716
TOTAL FOR POULTRY AND NONPOULTRY								
Wet Manure Weight, Tons	3,334,449		506,772				2,900,014	448,311

Notes for above table.

Note 1: On dairy cattle: A 49% reduction factor on the one-third of the manure that is piled outside barn and holding area. Sources: Agricultural Waste Management Field Handbook, Chapter 4 Agricultural Waste Characterics, USDA, SCS and conversations with various dairy specialists across the region.

Note 2: On swine: A 50% reduction factor on manure estimates because of the use of the lagoon when applied. Sources: Agricultural Waste Management Field Handbook, Chapter 4 Agricultural Waste Characterics, USDA, SCS.

Note 3: Related to Layers - Source Agricultural Waste Management Field Handbook, Chapter 4 Agricultural Waste Characterics, USDA, SCS

Weight of manure	60.50	lb/d/1000# animal		
Weight of litter	24.00	lb/d/1000# animal		
Total solids of manure	15.10	lb/d/1000# animal		
Total solids of litter	12.00	lb/d/1000# animal		
Moisture of manure	75.00%			
Moisture of litter	50.00%			
Delay factor (loss in manure on dry matter basis)	20.53%	1-(12.00/15.10)		
Assume no organic matter added	0			
Weight of manure at cleanout @75% moisture	48.08	lb/d/1000# animal	60.5*12.00/15.10	
Ratio of cleanout to produced	0.7947	48.08/60.5		
Delay factor (Dry Matter Loss)	0.2053	1-.7947		

Note 4: Related to Broilers - Source Agricultural Waste Management Field Handbook, Chapter 4 Agricultural Waste Characterics, USDA, SCS

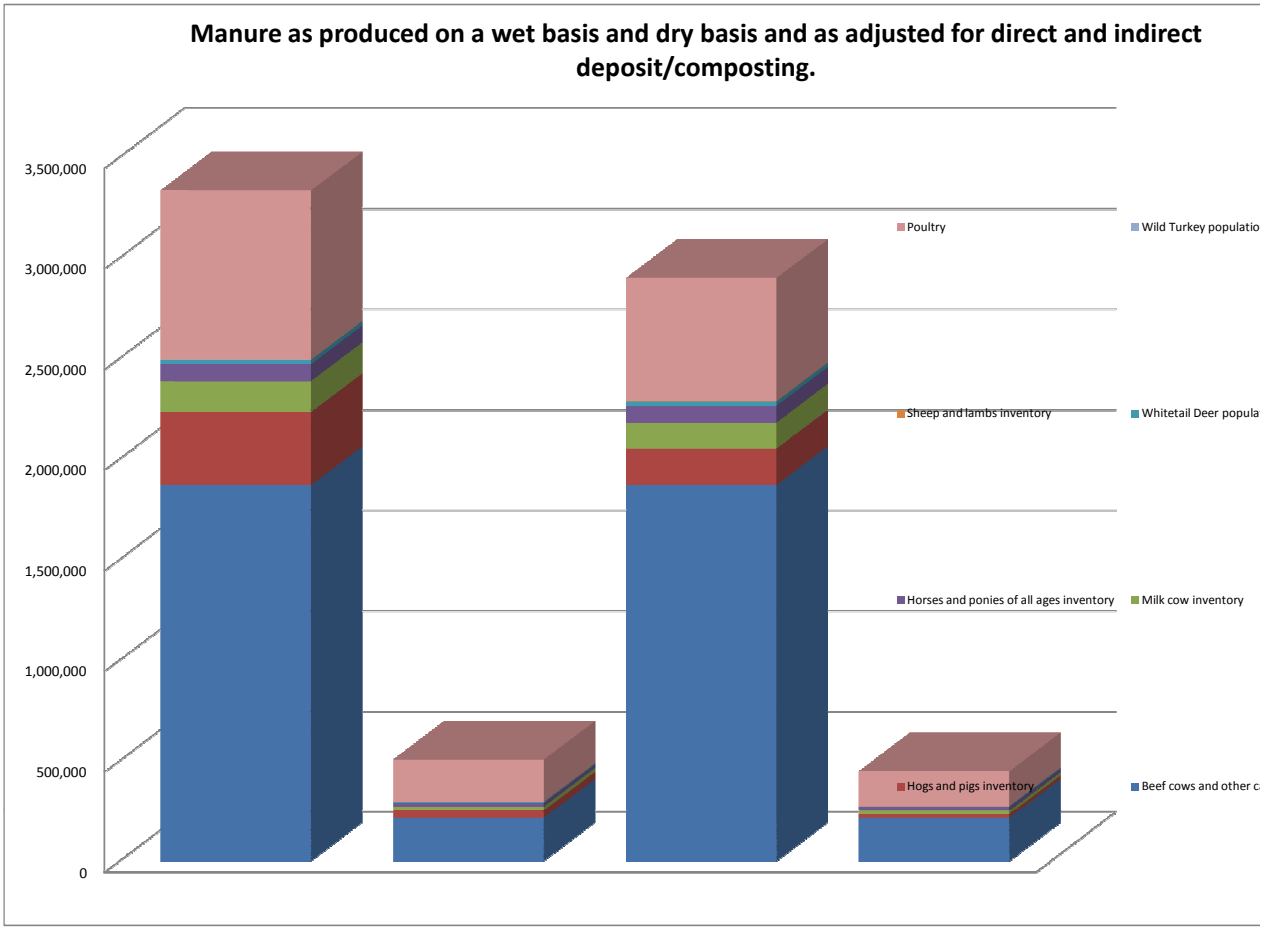
Weight of manure	80.00	lb/d/1000# animal		
Weight of litter	24.00	lb/d/1000# animal		18.24
Total solids of manure	20.00	lb/d/1000# animal		
Total solids of litter	26.50	lb/d/1000# animal		
Moisture of manure	75.00%			
Moisture of litter	24.00%			
Organic matter of litter	6.50	lb/d/1000# animal	26.5-20.0	
Litter organic matter as percent of litter	24.53%	6.5/26.5		
Litter organic matter as percent of manure	32.50%	6.5/20.00		
Manure in litter at cleanout (at 24% moisture)	18.11	lb/d/1000# animal	(1-.2453)*24	
Manure in litter at cleanout (dry matter basis)	13.77	lb/d/1000# animal	18.11-(1-.240)	
Ratio of manure at cleanout to produced	0.6883	13.7/(80.0*(1-.75))		
Delay factor (Dry Matter Loss)	0.3117	1-.6883		

Note 5: Related to Turkeys - Source Agricultural Waste Management Field Handbook, Chapter 4 Agricultural Waste Characterics, USDA, SCS

Weight of manure	43.60	lb/d/1000# animal		
Weight of litter	24.30	lb/d/1000# animal		16.04
Total solids of manure	10.90	lb/d/1000# animal		
Total solids of litter	16.10	lb/d/1000# animal		
Moisture of manure	75.00%			
Moisture of litter	34.00%			
Organic matter of litter	5.20	lb/d/1000# animal	16.1-10.9	
Litter organic matter as percent of litter	32.30%	5.2/16.10		
Litter organic matter as percent of manure	47.71%	5.2/10.90		
Manure in litter at cleanout (at 24% moisture)	16.45	lb/d/1000# animal	(1-..323)*24.3	
Manure in litter at cleanout (dry matter basis)	10.86	lb/d/1000# animal		67.70%
Ratio of manure at cleanout to produced	0.9961	10.86/(43.6*(1-.75))		
Delay factor	0.0039	1-.9961		

Manure as produced on a wet basis and dry basis and as adjusted for direct and indirect deposit/composting.

	Study Area			
	At time of production	At time of production	At time of deposit/composting	At time of deposit/composting
	Wet Manure, tons	Dry Manure, Tons	Wet Manure, tons	Dry Manure, Tons
Beef cows and other cattle and calves	1,870,847	217,018	1,870,847	217,018
Hogs and pigs inventory	362,311	36,231	181,155	18,116
Milk cow inventory	154,296	19,287	129,347	16,168
Horses and ponies of all ages inventory	83,892	18,456	83,892	18,456
Whitetail Deer population	21,421	5,355	21,421	5,355
Sheep and lambs inventory	1,409	352	1,409	352
Wild Turkey population	459	117	459	117
Geese and Duck population	43	12	43	12
Poultry	839,773	209,943	611,442	172,716
Total	3,334,449	506,772	2,900,014	448,311


Manure as produced on a wet basis and dry basis and as adjusted for direct and indirect deposit/composting.
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
Poultry
Wild Turkey populatio
Sheep and lambs inventory
Whitetail Deer popula
Horses and ponies of all ages inventory
Milk cow inventory
Hogs and pigs inventory
Beef cows and other c

Appendix H

Number of Properties by Size of Tracts, Total Acres Represented, and Number of Houses by County and State within the IRW (Source: County Plat Books based on County Tax Rolls).

Appendix H-1: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW

Appendix H-2A1: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Benton County, Arkansas.

Appendix H-2A2: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Crawford County, Arkansas.

Appendix H-2A3: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Washington County, Arkansas.

Appendix H-2O1: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Adair County, Oklahoma.

Appendix H-2O2: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Cherokee County, Oklahoma.

Appendix H-2O3: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Delaware County, Oklahoma.

Appendix H-2O4: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Sequoyah County, Oklahoma.

Appendix H-1: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW

	Arkansas				Oklahoma					IRW
	Benton County	Washington County	Crawford County	Total	Adair County	Cherokee County	Delaware County	Sequoyah County	Total	Total Study Area
Total Properties in Data Set	4,117	4,776	12	8,905	4,251	3,298	835	842	9,226	18,131
Total Acres Counted	193,002	288,909	2,822	484,733	259,202	232,624	51,769	48,532	592,127	1076860.3
Number of unique names that are listed as Owner	2,946	2,781	7	5,734	2,360	1,756	590	567	5,273	11007
Size of:: Number of Properties										
5 Acres	434	20	0	454	266	44	63	14	387	841
6-10 Acres	798	443	0	1,241	857	671	163	211	1,902	3143
11-20 Acres	842	1,046	1	1,889	675	732	123	175	1,705	3594
21-40 Acres	908	1,447	2	2,357	817	662	165	176	1,820	4177
41-80 Acres	667	997	3	1,667	761	493	144	121	1,519	3186
81-160 Acres	289	547	1	837	523	350	104	82	1,059	1896
161-240 Acres	71	118	0	189	154	122	36	25	337	526
241-320 Acres	35	40	0	75	84	70	17	12	183	258
321-400 Acres	12	31	1	44	40	39	4	7	90	134
401-480 Acres	12	8	1	21	24	25	8	8	65	86
481-560 Acres	11	13	2	26	16	23	2	5	46	72
561-640 Acres	35	53	1	89	21	59	5	5	90	179
Greater than 640 Acres	0	0	0	0	1	0	0	0	1	1
Not Counted	3	11	0	14	10	8	0	1	19	33
Total Number of Properties	4,117	4,774	12	8,903	4,249	3,298	834	842	9,223	18126
Size of:: Total Acres in Each Size										
5 Acres	2,166	88	0	2,254	1,327	220	311	70	1,928	4182
6-10 Acres	6,877	4,430	0	11,307	8,361	6,706	1,590	2,110	18,767	30074
11-20 Acres	14,306	17,960	20	32,286	12,136	13,183	2,247	3,092	30,658	62943.5
21-40 Acres	31,397	49,142	70	80,609	27,483	21,763	5,659	5,918	60,823	141432
41-80 Acres	42,587	63,081	216	105,884	47,350	30,687	9,180	7,421	94,638	200521.5
81-160 Acres	33,874	64,325	82	98,281	61,252	41,475	11,729	9,453	123,909	222190
161-240 Acres	14,378	23,403	0	37,781	30,504	24,002	7,045	5,031	66,582	104363
241-320 Acres	9,928	11,294	0	21,222	23,757	19,852	4,900	3,385	51,894	73116
321-400 Acres	4,460	11,194	347	16,001	14,437	14,163	1,421	2,658	32,679	48680
401-480 Acres	5,460	3,529	401	9,390	10,515	11,170	3,532	3,622	28,839	38229
481-560 Acres	5,789	6,815	1,053	13,657	8,410	12,113	1,064	2,605	24,192	37849
561-640 Acres	21,780	33,648	633	56,061	13,029	37,290	3,091	3,167	56,577	112638
Greater than 640 Acres	0	0	0	0	642	0	0	0	642	642
Total Acres	193,002	288,909	2,822	484,733	259,202	232,624	51,769	48,532	592,127	1076860
Size of:: Total Number of Houses										
5 Acres	126	127	0	253	30	2	3	1	36	289
6-10 Acres	311	213	0	524	188	104	16	14	322	846
11-20 Acres	395	675	0	1,070	216	187	29	21	453	1523
21-40 Acres	438	1,028	0	1,466	363	250	65	39	717	2183
41-80 Acres	466	869	3	1,338	488	296	64	43	891	2229
81-160 Acres	292	604	1	897	386	254	68	47	755	1652
161-240 Acres	86	120	0	206	130	145	36	7	318	524
241-320 Acres	39	32	0	71	79	38	7	10	134	205
321-400 Acres	23	38	0	61	37	19	2	5	63	124
401-480 Acres	4	5	0	9	16	8	10	5	39	48
481-560 Acres	12	10	0	22	8	16	3	0	27	49
561-640 Acres	8	1	0	9	7	7	7	3	24	33
Greater than 640 Acres	0	0	0	0	0	0	0	0	0	0
Total Houses	2,200	3,722	4	5,926	1,948	1,326	310	195	3,779	9705

Appendix H-2A1: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Benton County, Arkansas.

BENTON COUNTY, ARKANSAS
1995 Plat Book

Note: This plat map is different from the others and cannot be relied on for accurate information regarding creeks, rivers and streams. It appears that in some sections, it simply lists that a creek/river is there, but does not show the actual path of the creek. In those instances, the creek/river name will be noted in the parcel in which it appears, but no others.

Total Properties in Data Set	4,117
Total Acres Counted	193,002

Size of::	No. of Properties	Total Acres	No. of Houses
5 Acres	434	2,166	126
6-10 Acres	798	6,877	311
11-20 Acres	842	14,306	395
21-40 Acres	908	31,397	438
41-80 Acres	667	42,587	466
81-160 Acres	289	33,874	292
161-240 Acres	71	14,378	86
241-320 Acres	35	9,928	39
321-400 Acres	12	4,460	23
401-480 Acres	12	5,460	4
481-560 Acres	11	5,789	12
561-640 Acres	35	21,780	8
Greater than 640 Acres	0	0	0
Not Counted	3		
Total	4117	193,002	2,200
Number of Nulls	0		
Check Total	4117		

Number of unique names that are listed as Owner 2946

Appendix H-2A2: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Crawford County, Arkansas.

CRAWFORD COUNTY, OKLAHOMA
1994 Plat Book

Note:

Total Properties in Data Set	12
Total Acres Counted	2,822

Size of::	No. of Properties	Total Acres	Total Houses
1-5 Acres	0	0	0
6-10 Acres	0	0	0
11-20 Acres	1	20	0
21-40 Acres	2	70	0
41-80 Acres	3	216	3
81-160 Acres	1	82	1
161-240 Acres	0	0	0
241-320 Acres	0	0	0
321-400 Acres	1	347	0
401-480 Acres	1	401	0
481-560 Acres	2	1,053	0
561-640 Acres	1	633	0
Greater than 640 Acres	0	0	0
Not Counted	0		
Total	12	2,822	4
Number of Nulls	0		
Check Total	12		

Number of unique names that are listed as Owner 7

Appendix H-2A3: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Washington County, Arkansas.

WASHINGTON COUNTY, ARKANSAS
Note:

Total Properties in Data Set	4,776
Total Acres Counted	288,909

Size of::	No. of Properties	Total Acres	No. of Houses
1-5 Acres	20	88	127
6-10 Acres	443	4,430	213
11-20 Acres	1046	17,960	675
21-40 Acres	1447	49,142	1,028
41-80 Acres	997	63,081	869
81-160 Acres	547	64,325	604
161-240 Acres	118	23,403	120
241-320 Acres	40	11,294	32
321-400 Acres	31	11,194	38
401-480 Acres	8	3,529	5
481-560 Acres	13	6,815	10
561-640 Acres	53	33,648	1
Greater than 640 Acres	0	0	0
Not Counted	11		
Total	4774	288,909	3,722
Number of Nulls	2		
Check Total	4776		

Number of unique names that are listed as Owner 2781

Appendix H-2O1: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Adair County, Oklahoma.

ADAIR COUNTY, OKLAHOMA
1999 Plat Book

Note:

Total Properties in Data Set	4,251
Total Acres Counted	259,202

Size of::	No. of Properties	Total Acres	Total Houses
1-5 Acres	266	1,327	30
6-10 Acres	857	8,361	188
11-20 Acres	675	12,136	216
21-40 Acres	817	27,483	363
41-80 Acres	761	47,350	488
81-160 Acres	523	61,252	386
161-240 Acres	154	30,504	130
241-320 Acres	84	23,757	79
321-400 Acres	40	14,437	37
401-480 Acres	24	10,515	16
481-560 Acres	16	8,410	8
561-640 Acres	21	13,029	7
Greater than 640 Acres	1	642	0
Not Counted	10		
Total	4249	259,202	1,948
Number of Nulls	2		
Check Total	4251		

Number of unique names that are listed as Owner	2360

Appendix H-2O2: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Cherokee County, Oklahoma.

CHEROKEE COUNTY, OKLAHOMA
2001 Plat Book

Note:

Total Properties in Data Set	3,298
Total Acres Counted	232,624

Size of::	No. of Properties	Total Acres	Total Houses
1-5 Acres	44	220	2
6-10 Acres	671	6,706	104
11-20 Acres	732	13,183	187
21-40 Acres	662	21,763	250
41-80 Acres	493	30,687	296
81-160 Acres	350	41,475	254
161-240 Acres	122	24,002	145
241-320 Acres	70	19,852	38
321-400 Acres	39	14,163	19
401-480 Acres	25	11,170	8
481-560 Acres	23	12,113	16
561-640 Acres	59	37,290	7
Greater than 640 Acres	0	0	0
Not Counted	8		
Total	3298	232,624	1,326
Number of Nulls	0		
Check Total	3298		

Number of unique names that are listed as Owner 1756

Appendix H-2O3: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Delaware County, Oklahoma.

DELAWARE COUNTY, OKLAHOMA
2000 Plat Book

Note:

Total Properties in Data Set	835
Total Acres Counted	51,769

Size of::	No. of Properties	Total Acres	Total Houses
1-5 Acres	63	311	3
6-10 Acres	163	1,590	16
11-20 Acres	123	2,247	29
21-40 Acres	165	5,659	65
41-80 Acres	144	9,180	64
81-160 Acres	104	11,729	68
161-240 Acres	36	7,045	36
241-320 Acres	17	4,900	7
321-400 Acres	4	1,421	2
401-480 Acres	8	3,532	10
481-560 Acres	2	1,064	3
561-640 Acres	5	3,091	7
Greater than 640 Acres	0	0	0
Not Counted	0		
Total	834	51,769	310
Number of Nulls	1		
Check Total	835		

Number of unique names that are listed as Owner 590

Appendix H-2O4: Summary of number of properties by size of tracts, total acres represented, and number of houses by size of tracts by county and by state for the area included in the study area for the IRW in Sequoyah County, Oklahoma.

SEQUOYAH COUNTY, OKLAHOMA
2001 Plat Book

Note:

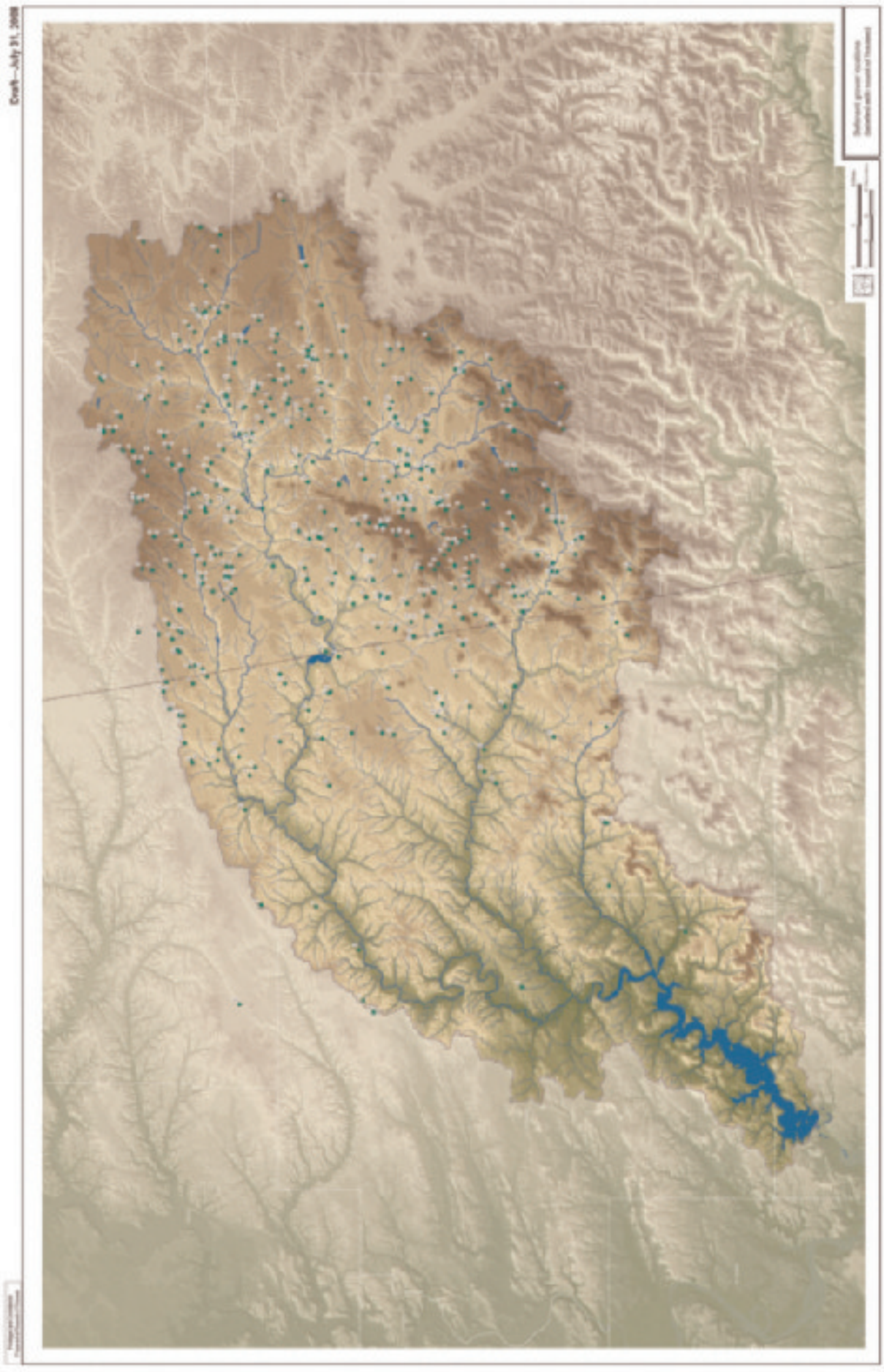
Total Properties in Data Set	842
Total Acres Counted	48,532

Size of::	No. of Properties	Total Acres	Total Houses
1-5 Acres	14	70	1
6-10 Acres	211	2,110	14
11-20 Acres	175	3,092	21
21-40 Acres	176	5,918	39
41-80 Acres	121	7,421	43
81-160 Acres	82	9,453	47
161-240 Acres	25	5,031	7
241-320 Acres	12	3,385	10
321-400 Acres	7	2,658	5
401-480 Acres	8	3,622	5
481-560 Acres	5	2,605	0
561-640 Acres	5	3,167	3
Greater than 640 Acres	0	0	0
Not Counted	1		
Total	842	48,532	195
Number of Nulls	0		
Check Total	842		

Number of unique names that are listed as Owner 567

Appendix I

Defendant's Report of Active Poultry Houses in the IRW.



Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses
-94.278367	35.923917	3
-94.336883	36.275704	3
-94.409802	35.913584	3
-94.414297	36.210421	3
-94.208850	36.254333	3
-94.336883	36.275704	3
-94.375865	36.225492	5
-94.380666	36.215198	3
-94.414294	36.210519	3
-94.414297	36.210421	3
-94.462077	36.208906	5
-94.516067	36.115500	5
-94.468517	35.959900	3
-94.271367	35.917417	4
-94.931167	36.060233	4
-94.494183	36.067850	4
-94.375865	36.225492	3
-94.380581	35.876576	9
-94.297367	35.919550	4
-94.666267	36.252150	6
-94.608550	35.958917	3
-94.513917	36.004100	3
-94.296268	36.136916	5
-94.210750	36.135767	3
-94.449825	36.226816	3
-94.449825	36.226816	3
-94.386499	36.250398	3
-94.820117	36.120500	3
-94.264740	36.020916	6
-94.297300	35.919517	4
-94.690017	35.931433	4
-94.489217	35.996633	4
-94.340467	36.313250	3
-94.570917	36.281783	3
-94.669783	36.232929	6
-94.307200	36.128700	4
-94.359864	35.910000	4
-94.458530	35.871677	4
-94.395600	35.993700	4
-94.464779	35.791146	4
-94.402652	35.984086	8
-94.535647	36.018142	10
-94.459329	35.992361	6
-94.473403	36.211692	6
-94.423627	36.034496	10
-94.533238	35.994711	10
-94.431141	35.841833	8
-94.434236	35.847810	10
-94.359449	35.915228	4

Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses	
-94.488887	35.899889	3	
-94.494566	35.819033	4	
-94.463670	36.010602	4	
-94.648000	36.258800	3	
-94.922500	36.201400	6	
-94.280500	36.215080	4	
-94.193560	36.236890	10	
-94.567810	36.253280	1	
-94.566170	36.247500	1	
-94.195560	36.239970	17	
-94.295560	36.196940	8	
-94.461530	36.214420	8	
-94.484860	35.974810	4	
-94.392560	35.989000	4	
-94.112860	36.221080	3	
-94.129720	36.224310	5	
-94.286030	36.300720	10	
-94.393390	36.231580	6	
-94.283670	36.215080	2	
-94.243830	35.937000	2	
-94.634000	36.198390	6	
-94.493170	35.911470	6	
-94.312250	36.004890	8	
0.000000	36.195860	4	missing lon
-94.386360	36.197690	6	
-94.480830	36.210560	3	
-94.225360	36.194470	14	
-94.224610	36.162610	4	
-94.422470	35.920190	5	
-94.105420	36.242030	7	
-94.465140	35.919640	5	
-94.668706	36.250470	2	
-94.189250	36.232080	6	
-94.224360	36.202440	4	
-94.409610	36.258060	3	
-94.483310	35.929250	4	
-94.254720	36.155390	3	
-94.266940	36.344890	2	
-94.472390	36.215580	16	
-94.432920	36.127810	6	
		5	location not provided
-94.611900	36.273860	2	
-94.533533	36.285667	3	
-94.531417	35.989100	6	
-94.449200	35.888367	4	
-94.369733	36.069367	6	
-94.549967	36.266683	4	
-94.618850	36.260067	2	
-94.524467	35.990383	6	

Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses
-94.434533	35.967883	4
-94.508167	36.263833	4
-94.506767	36.265300	4
-94.497350	36.217600	4
-94.618267	36.265283	3
-94.385250	36.244750	3
-94.531417	36.261633	2
-94.594050	36.280800	2
-94.353117	36.230750	2
-94.594050	36.280800	2
-94.611917	36.274883	3
-94.321383	36.343300	3
-94.551800	36.110183	4
-94.338933	36.033300	6
-94.360683	36.234283	2
-94.489967	36.209967	2
-94.250650	36.308617	5
-94.585150	36.249900	4
-94.429050	36.035917	6
-94.495967	35.845017	4
-94.460217	36.273967	4
-94.404483	36.253250	2
-94.485533	36.206033	3
-94.464133	36.303533	5
-94.304350	36.326000	2
-94.409433	36.029867	6
-94.318733	36.343733	6
-94.449067	36.220767	3
-94.339883	36.323417	3
-94.480083	36.104033	6
-94.530933	36.307717	1
-94.471767	36.258717	3
-94.661917	36.202033	1
-94.429533	36.268950	2
-94.577500	36.235100	3
-94.290500	36.150830	4
-94.329800	36.106940	1
-94.595640	36.107550	6
-94.321660	36.188050	2
-94.292520	36.234750	5
-94.298660	36.239500	4
-94.240830	36.129720	2
-94.188330	36.213830	7
-94.274000	35.925220	1
-94.492390	35.937170	1
-94.504580	35.975420	3
-94.266380	36.211330	3
-94.692880	36.106830	8
-94.619370	35.993350	8

Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses
-94.619370	35.993350	10
-94.239580	36.104830	1
-94.415190	35.861720	8
-94.501390	36.081470	2
-94.330000	36.189720	5
-94.268880	36.033610	8
-94.345550	36.254160	4
-94.479380	36.239720	2
-94.449570	35.986220	6
-94.271940	36.105550	3
-94.243330	36.124440	3
-94.425000	35.960270	4
-94.310500	36.035120	6
-94.312290	36.034770	6
-94.321660	36.188050	4
-94.467390	35.872890	4
-94.467390	35.872890	2
-94.414380	35.868610	2
-94.460190	35.975110	3
-94.221910	36.220800	1
-94.220690	36.216330	3
-94.284940	36.168830	1
-94.431160	35.841920	8
-94.232970	36.030050	9
-94.236780	35.968470	2
-94.076720	36.154610	4
-94.449110	35.848080	6
-94.255830	35.965270	2
-94.529100	36.265700	5
-94.222930	36.002470	6
-94.469270	36.244250	3
-94.423330	36.099720	2
-94.308330	36.006380	5
-94.444330	36.108380	4
-94.404310	36.111720	6
-94.450080	36.245630	5
-94.225270	36.216550	2
-94.461300	36.165550	4
-94.404440	36.203610	3
-94.291110	35.911630	2
-94.495160	36.045800	6
-94.215420	36.248110	2
-94.263050	36.346940	2
-94.492700	35.903700	6
-94.402500	35.877400	4
-94.456280	36.063060	2
-94.456080	36.064030	2
-94.456080	36.064030	3
-94.414380	35.868860	3

Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses
-94.666340	36.223980	6
-94.355130	36.026580	4
-94.361390	36.171780	1
-94.361390	36.171780	3
-94.430440	36.291270	3
-94.227580	36.223470	4
-94.479370	36.239730	6
-94.392060	36.303080	2
-94.280550	36.185000	8
-94.268880	36.033610	4
-94.360910	35.998210	10
-94.394860	36.217520	4
-94.473250	36.240380	3
-94.285500	36.148890	2
-94.318880	36.004720	3
-94.479440	36.240500	2
-94.468880	36.100270	4
-94.383330	36.000000	6
-94.235000	36.129720	3
-94.322770	36.194440	4
-94.253880	36.281930	10
-94.483610	35.960000	4
-94.401800	36.029040	6
-94.492700	35.903700	6
-94.316660	35.860380	5
-94.302600	36.134640	7
-94.430330	36.290910	2
-94.273720	35.863190	4
-94.473360	36.239830	2
-94.491110	36.052770	2
-94.236660	36.164160	3
-94.314830	36.146690	10
-94.332160	36.056630	3
-94.232970	36.042720	6
-94.257220	35.965830	3
-94.475830	36.060550	2
-94.339440	36.217960	5
-94.240770	36.089970	3
-94.291670	36.211890	4
-94.488440	36.229060	4
-94.145790	36.131160	3
-94.322250	36.200970	2
-94.322250	36.200970	1
-94.846550	35.732450	4
-94.456417	35.951800	4
-94.577050	35.973033	4
-94.437717	35.970850	5
-94.528033	36.037267	4
-94.449330	36.201233	4

Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses
-94.351680	36.124370	4
-94.557100	36.096900	4
-94.268317	36.115700	4
-94.230040	36.125430	4
-94.489367	36.122517	4
-94.672717	36.184500	4
-94.681817	36.190533	4
-94.400200	36.212590	4
-94.432083	36.116267	4
-94.255980	36.133960	4
-94.465333	36.292450	4
-94.637133	36.082717	4
-94.430700	36.117867	4
-94.439300	36.262567	2
-94.575210	36.158360	2
-94.641167	35.870683	2
-94.585083	36.153750	2
-94.522733	36.275467	2
-94.525933	36.055983	1
-94.475933	35.960033	2
-94.437567	35.978200	2
-94.653817	36.222917	2
-94.525933	36.055983	1
-94.538483	36.271700	2
-94.818367	36.178383	1
-94.463417	36.008783	1
-94.400033	36.237600	1
-94.463417	36.132350	1
-94.638683	36.038933	2
-94.441867	36.230433	2
-94.416933	36.076750	2
-94.214110	36.092290	2
-94.637167	36.051283	2
-94.613083	36.128650	2
-94.357217	36.035050	2
-94.522800	35.936833	2
-94.444300	36.072067	2
-94.473883	36.081883	2
-94.214110	36.092290	2
-94.372533	36.044817	2
-94.402183	36.018183	2
-94.475783	36.130150	2
-94.358883	36.001302	2
-94.288950	36.040780	2
-94.520137	36.020690	14
-94.520137	36.020690	12
-94.256450	36.134610	4
-94.373240	36.129270	5
-94.654900	35.943700	3

Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses
-94.302600	36.165710	3
-94.265460	36.164830	1
-94.587880	35.911860	2
-94.589450	36.044840	2
-94.553070	36.050710	2
-94.637330	35.986020	2
-94.731220	35.817730	2
-94.280000	36.000000	4
-94.203030	36.181070	4
-94.594890	35.995020	4
-94.677380	35.943700	5
-94.304930	36.037570	3
-94.304930	36.037570	1
-94.346150	36.024490	10
-94.388330	36.028840	8
-94.416730	36.052680	10
-94.418400	36.052790	10
-94.418730	36.048280	10
-94.419790	36.048770	10
-94.415820	36.064620	10
-94.355040	36.022730	10
-94.343520	36.024280	10
-94.606140	35.987740	10
-94.390600	36.026340	10
-94.391610	36.024240	10
-94.390860	36.028840	10
-94.343880	36.190600	4
-94.121010	36.302260	3
-94.299880	36.111060	2
-94.493820	36.052770	3
-94.459100	36.237910	4
-94.282040	36.296230	4
-94.593730	36.105660	2
-94.292020	36.125780	8
-94.224000	36.264660	6
-94.187520	36.114870	2
-94.357440	36.004110	2
-94.352210	36.307580	4
-94.399500	35.967770	2
-94.319500	36.334000	2
-94.319500	36.334000	2
-94.271830	36.182160	2
-94.309360	36.178040	6
-94.217480	36.161200	3
-94.289660	36.278660	3
-94.637320	35.986040	3
-94.458340	35.959030	4
-94.352210	36.307580	4
-94.304930	36.037570	1

Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses
-94.304930	36.037570	3
-94.646200	36.158280	4
-94.375390	36.096460	4
-94.394990	35.991110	6
-94.194650	36.222790	3
-94.551660	36.264430	1
-94.551660	36.264430	1
-94.401330	36.176500	2
-94.274900	36.181890	6
-94.267330	36.147000	5
-94.290100	36.064670	4
-94.482590	35.955570	4
-94.390000	36.030000	5
-94.281590	36.114680	4
-94.428070	35.986910	4
-94.354200	36.271760	4
-94.244500	36.119160	3
-94.324580	36.280440	1
-94.324580	36.280440	2
-94.203030	36.181070	3
-94.430000	36.020000	2
-94.366160	36.036820	2
-94.583660	36.277830	4
-94.493810	36.052770	3
-94.608760	35.922230	2
-95.045460	35.536350	2
-94.424960	36.139350	12
-94.390000	36.040000	3
-94.344740	36.138280	2
-94.270160	36.153660	4
-94.516670	35.966670	6
-94.361300	36.263180	4
-94.342220	36.294870	2
-94.250000	36.050000	6
-94.521100	35.804800	3
-94.493820	36.052770	4
-94.731980	35.814660	2
-94.280000	36.000000	6
-94.394330	36.309330	2
-94.394330	36.309330	2
-94.360000	36.010000	3
-94.235160	36.253000	2
-94.293770	36.173420	5
-94.509010	35.903760	2
-94.509010	35.903760	4
-94.267790	36.281640	3
-94.271830	36.182160	2
-94.534000	35.793330	2
-94.450470	35.887520	6

Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses
-94.296050	36.043590	1
-94.296060	36.043600	2
-94.359880	36.260260	4
-94.370000	36.010000	2
-94.797410	35.812610	4
-94.544210	35.966330	2
-94.544210	35.966330	2
-94.389300	36.034950	10
-94.501111	36.025000	8
-94.643333	36.114167	4
-94.631111	35.816111	4
-94.490278	35.875000	6
-94.402500	35.983889	5
-94.512500	35.953333	10
-94.467500	35.867500	6
-94.535556	36.018056	10
-94.429167	36.035833	10
-94.631111	35.816111	4
-94.395556	35.993611	4
-94.569722	36.239722	2
-94.392222	36.046944	1
-94.471111	36.032222	2
-94.483611	35.913889	3
-94.431389	35.841944	2
-94.491667	36.007500	2
-94.431389	35.959167	4
-94.319444	35.912500	2
-94.312778	36.240556	1
-94.630000	36.259444	2
-94.400833	35.940000	4
-94.717778	36.195278	2
-94.491667	36.007500	2
-94.389722	36.310000	2
-94.464722	35.996111	2
-94.357222	36.141667	3
-94.404167	36.236667	2
-94.330278	36.010833	4
-94.526389	36.036944	6
-94.443889	35.981111	6
-94.388056	35.919444	2
-94.865149	36.076048	3
-94.918589	36.071173	3
-94.236000	36.236000	2
-94.904420	35.904420	2
-94.290220	35.947060	1
-94.191720	36.247170	2
-94.356470	36.167920	1
-94.196390	36.244940	1
-94.294250	36.194890	1

Defendant's Report of Active Poultry Houses in the IRW

Longitude	Latitude	Number Houses
-94.248310	36.206500	4
-94.254780	35.974390	6
-94.366390	36.297750	4
-94.166560	36.236860	4

Appendix J

WILDLIFE KNOWN TO EXIST WITHIN OR VISIT THE IRW

WILDLIFE KNOWN TO EXIST WITHIN OR VISIT THE ILLINOIS RIVER WATERSHED

Sources: Arkansas Game and Fish Commission
Oklahoma Department of Wildlife Conservation
Wedington Wildlife Management Area
White Rock Wildlife Management Area
Cherokee Wildlife Management Area
Cookson Wildlife Management Area
Tenkiller Wildlife Management Area
Sparrow Hawk Wildlife Management Area
Sequoyah National Wildlife Refuge
The Audubon Society Field Guide to North American Birds
Cornell Lab of Ornithology-Guide to Birds
Virginia Depart.of Environmental Quality—Fecal Coliforms for TMDL

Fecal Coliform Estimates/Head/Day X 10^6 CFU
(Based on Body Weight Comparators within Class)

Water or Marsh Birds (No. of species)		Forrest and/or Meadow Birds	
Geese (3)	799	Crow	200
Ducks (15)	2,430	Hawks (3)	240
Heron (2)	850	GH Owl	560
Cormorant	850	Barred Owl	320
Bald Eagle	1,600	BW Quail	70
Grebe	480	Pileated Woodpecker	80
Merganser	2,430	Screech owl	80
Coot	1,700	Grackle	50
Egret	180	Killdeer	40
Bittern	180	Meadow Lark	40
Marsh Hawk	240	Jay	35
Vulture	640	Night Hawk	30
Gallinule	130	Hairy Woodpecker	30
Rail	130	Redbellied Woodp.	30
Kingfisher	70	Starling	30
Snipe	65	Robin	27
Woodcock	80	Whip-poor-will	22
Bank Swallow	20	Mockingbird	20
Red-winged B	20	Blackbilled Cuckoo	20
SP Plover	17	Eastern Kingbird	18
Water Thrush	8	Loggerheaded Shrike	17
Swamp Spar.	8	Veery Thrush	15
Will. Flycatcher	5	Scissortail FC	15
Alder FC	5	Cowbird	15
Marsh Wren	5	Cardinal	15

Mammals, Reptiles and Amphibians	
Elk	12,000
WT Deer	347
Raccoon	113
Armadillo	80
Coyote	990
Foxes (2)	500
Bobcat	450
Raccoon	113
Skunks (2)	80
Opossum	80
Mink	60
Musk Rat	25
River Otter	25
Rabbit (2)	20
Squirrel (2)	5
Rodents (?)	5
Turtles (?)	?
Tortoises	?
Snakes (?)	?
Frogs (?)	?
Tree Frogs (?)	?
Lizards (?)	?
Skinks (?)	?

Forrest and Meadow Birds Cont.	
Grosbeak	15
Towhee	15
Bobolink	15
Thrushes (3)	15
Eastern Bluebird	10
Sparrows (6)	10
Hermit Thrush	10
Downy Woodpecker	10
Junco	8
Grasshopper Sparrow	7
Tufted Titmouse	7
Eastern Phoebe	7
Field Sparrow	5
Goldfinches	5
Buntings (2)	5
YB Flycatcher	5
Warbling Vireo	5
Eastern Pewee	5
Least Flycatcher	5
Warblers (4)	3
Chickadee	3
American Redstart	3
Kinglet	3
Hummingbirds (2)	2
Wild Turkey	93
Pigeon	70
Mourning Dove	40

Appendix K

Cattle Density in the IRW expressed as Animals per Square Mile based on the 2002 Census Data by Zip Code.

2002 Cattle Density (animals/sq. mile) Illinois River Watershed

Source: USDA 2002 Census of Agriculture
USGS National Hydrography Dataset